

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

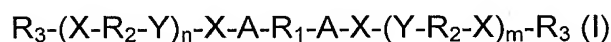
Claims 1 - 28 (Canceled)

Claim 29 (Currently Amended): A precursor article of a composite material comprising a polymeric matrix and at least one reinforcing yarn and/or fibers, said precursor article comprising at least one reinforcing yarn and/or fibers and at least one polymeric-matrix yarn and/or fibers, wherein:

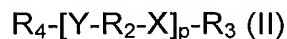
said reinforcing yarn and/or fibers are made at least in part of reinforcing material;

said polymeric-matrix yarn and/or fibers are made of a thermoplastic polymer, said thermoplastic polymer of said reinforcing yarn and/or fibers and/or of said polymeric-matrix yarn and/or fibers comprises at least one polycondensate consisting of:

30 to 100 mol%, limits inclusive, of macromolecular chains satisfying the following formula (I):



0 to 70 mol%, limits inclusive, of macromolecular chains satisfying the following formula (II):



in which chains:

-X-, -Y- is a radical obtained from the condensation of two reactive functional groups F_1 and F_2 such that:

F_1 is the precursor of the -X- radical and F_2 is the precursor of the -Y- radical, or vice versa,
the functional groups F_1 cannot react together by condensation and
the functional groups F_2 cannot react together by condensation;

A is a covalent bond or an aliphatic hydrocarbon radical that may comprise heteroatoms and contains 1 to 20 carbon atoms;

R_2 is a branched or unbranched, aliphatic or aromatic hydrocarbon radical containing 2 to 20 carbon atoms;

R_3 , R_4 represents hydrogen, a hydroxyl radical or a hydrocarbon radical;

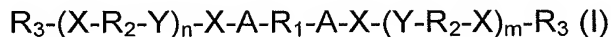
R_1 is a linear or cyclic, aromatic or aliphatic, hydrocarbon radical containing at least 2 carbon atoms and optionally including heteroatoms; and

n , m and p each represent a number between 30 and 200,

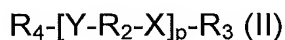
wherein the polycondensate is obtained by melt blending a polyamide obtained by polymerization of lactams and/or amino acids or a polyester obtained by polymerization of lactones and/or hydroxyacids, with a difunctional compound, wherein the difunctional compound comprises at least one of adipic acid, decanoic or sebacic acid, dodecanoic acid, terephthalic acid, isophthalic acid, hexamethylenediamine, methylpentamethylenediamine, 4,4'-diaminodicyclohexylmethane, butanediamine, metaxylylenediamine, 1,3-propanediol, 1,2-ethanediol, 1,4-butanediol, 1,5-pentanediol, 1,6-hexanediol or polytetrahydrofuran.

Claim 30 (Currently Amended): The article as claimed in claim 29, wherein the thermoplastic polymer comprises at least one polyamide A1 **[[A1]]** having:

30 to 100 mol%, limits inclusive, of macromolecular chains satisfying the following formula (I):



0 to 70 mol%, limits inclusive, of macromolecular chains satisfying the following formula (II):



in which:

Y is the $\begin{array}{c} \text{---N---} \\ | \\ R_5 \end{array}$ radical when X represents the $\begin{array}{c} \text{---C---} \\ || \\ O \end{array}$ radical;

Y is the $\begin{array}{c} \text{---C---} \\ || \\ O \end{array}$ radical when X represents the $\begin{array}{c} \text{---N---} \\ | \\ R_5 \end{array}$ radical;

A is a covalent bond or an aliphatic hydrocarbon radical optionally including heteroatoms and containing 1 to 20 carbon atoms;

R₂ is a branched or unbranched, aliphatic or aromatic, hydrocarbon radical containing 2 to 20 carbon atoms;

R₃, R₄ represents hydrogen, a hydroxyl radical or a hydrocarbon radical

comprising a $\begin{array}{c} \text{---C---} \\ || \\ O \end{array}$ or $\begin{array}{c} \text{---N---} \\ | \\ R_5 \end{array}$ group;

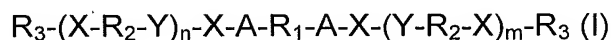
R₅ represents hydrogen or a hydrocarbon radical containing 1 to 6 carbon atoms;

R₁ is a linear or cyclic, aromatic or aliphatic, hydrocarbon radical containing at least 2 carbon atoms and optionally including heteroatoms; and

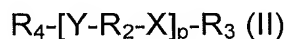
n, m and p each represent a number between 30 and 200.

Claim 31 (Previously Presented): The article as claimed in claim 29, wherein the thermoplastic polymer comprises at least one polyester A2 consisting of:

30 to 100 mol%, limits inclusive, of macromolecular chains satisfying the following formula (I):



0 to 70 mol%, limits inclusive, of macromolecular chains satisfying the following formula (II):



in which chains:

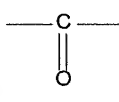
Y is the -O- radical when X represents the  radical;

Y is the  radical when X represents the -O- radical;

A is a covalent bond or an aliphatic hydrocarbon radical optionally including heteroatoms and containing 1 to 20 carbon atoms;

R₂ is a branched or unbranched, aliphatic or aromatic, hydrocarbon radical containing 2 to 20 carbon atoms;

R₃, R₄ represents hydrogen, a hydroxyl radical or a hydrocarbon radical

comprising a  or -O- group;

R₁ is a linear or cyclic, aromatic or aliphatic, hydrocarbon radical containing at least 2 carbon atoms and optionally including heteroatoms; and

n, m and p each represent a number between 30 and 200.

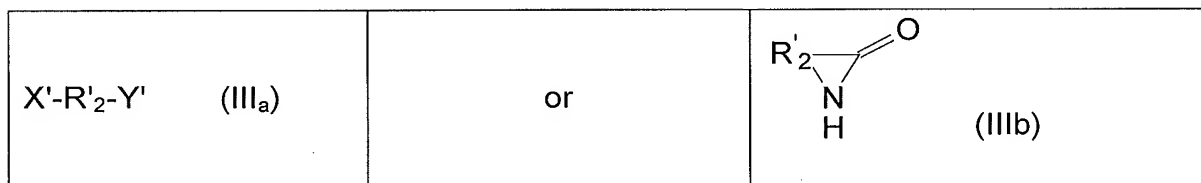
Claim 32 (Previously Presented): The article as claimed in claim 29, wherein n, m and p are 30 to 150.

Claim 33 (Currently Amended): The article as claimed in claim 58, [[30,]] wherein the polyamide A1 [[A1]] or the polyester A2 comprises at least 45 mol%, of macromolecular chains satisfying formula (I).

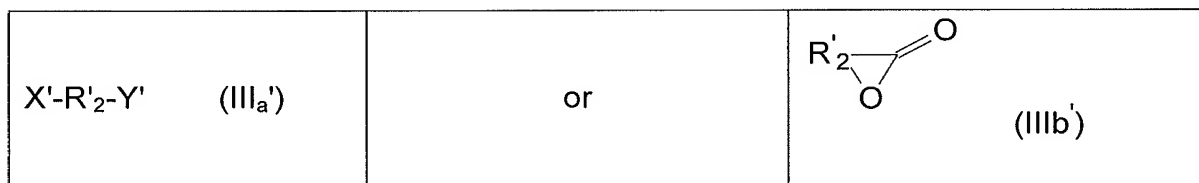
Claim 34 (Previously Presented): The article as claimed in claim 29, wherein R₂ is a pentamethylene radical.

Claim 35 (Currently Amended) The article as claimed in claim 58, [[30,]] wherein the polyamide A1 [[A1]] or the polyester A2 [[A2]] is obtained by copolymerization from a monomer mixture comprising:

- a) a difunctional compound, the reactive functional groups of which are selected ~~chosen~~ from the group consisting of amines, carboxylic acids, alcohols and derivatives thereof, the reactive functional groups being identical;
- b) monomers of the following general formulae (III_a) and (III_b) in the case of the polyamide A1:



- b') monomers of the following general formulae (III_a') and (III_b') in the case of the polyester A2:



in which formulae:

R'₂ represents a substituted or unsubstituted, aliphatic, cycloaliphatic or aromatic hydrocarbon radical containing 2 to 20 carbon atoms and optionally including heteroatoms;

Y' is an amine radical when X' represents a carboxylic radical, or Y' is a carboxylic radical when X' represents an amine radical, in the case of the polyamide A1 [[A1]]; and

Y' is a hydroxyl radical when X' represents a carboxylic radical, or Y' is a carboxylic radical when X' represents a hydroxyl radical, in the case of the polyester A2.

Claim 36 (Previously Presented): The article as claimed in claim 35, wherein compound a) represents 0.1 to 2 mol% relative to the number of moles of monomers of type b) or b').

Claim 37 (Canceled)

Claim 38 (Previously Presented): The article as claimed in claim 37, wherein the difunctional compound represents 0.05 to 2% by weight relative to the weight of polyamide or polyester.

Claim 39 (Canceled)

Claim 40 (Canceled)

Claim 41 (Currently Amended): The article as claimed in claim 58, ~~[[30,]]~~ wherein the polyamide A1 ~~[[A1]]~~ or the polyester A2 is obtained by melt blending a polyamide ~~of the type of those~~ obtained by polymerization of lactams and/or amino acids or a polyester ~~of the type of those~~ obtained by polymerization of lactones and/or hydroxyacids, with a compound of formula (V):



in which:

R is a substituted or unsubstituted, linear or cyclic, aromatic or aliphatic hydrocarbon radical optionally including heteroatoms; and

G is a functional group or a radical that may react selectively either with the amine reactive functional groups, or with the alcohol reactive functional groups, or with the carboxylic acid reactive functional groups of the polyamide or of the polyester, in order to form covalent bonds.

Claim 42 (Previously Presented): The article as claimed in claim 41, wherein the compound of formula (V) represents 0.05 to 2% by weight relative to the weight of polyamide or polyester.

Claim 43 (Previously Presented): The article as claimed in claim 29, further comprising at least one matrix yarn and/or fibers made of a linear thermoplastic polymer.

Claim 44 (Previously Presented): The article as claimed in claim 43, wherein the linear polymer is an aliphatic and/or semicrystalline polyamide or copolyamide which is nylon-4,6, nylon-6, nylon-6,6, nylon-6,9, nylon-6,10, nylon-6,12, nylon-6,36, nylon-11, nylon-12, a semicrystalline semiaromatic polyamide, a copolyamide, or a polyphthalamides.

Claim 45 (Previously Presented): The article as claimed in claim 29, wherein the matrix yarns and/or fibers further comprise additives, which are flame retardants, plasticizers, heat and light stabilizers, waxes, pigments, nucleating agents, antioxidants, or impact strength modifiers.

Claim 46 (Previously Presented): The article as claimed in claim 29, wherein the reinforcing yarns and/or fibers are carbon, glass, aramid, polyimide yarns or fibers.

Claim 47 (Previously Presented): The article as claimed in claim 29, wherein the reinforcing yarns and/or fibers are natural yarns, fibers, sisal, hemp or flax yarns.

Claim 48 (Previously Presented): The article as claimed in claim 29, further comprising a matrix precursor powder material.

Claim 49 (Previously Presented): The article as claimed in claim 48, wherein said matrix precursor powder material is a polyamide.

Claim 50 (Previously Presented): The article as claimed in claim 29, formed from continuous or chopped yarns, tapes, mats, braids, wovens, knits, webs, multiaxial fabrics, or nonwovens.

Claim 51 (Previously Presented): A composite, made by at least partial melting of the matrix yarns and/or fibers of an article as defined in claim 29.

Claim 52 (Previously Presented): The composite as claimed in claim 51, having a reinforcement content of between 25 and 80% by weight.

Claim 53 (Withdrawn): A process for the fabrication of a semifinished product, comprising the step of thermoforming or calendering the article as defined in claim 29, in order to at least partially melt the matrix yarns and/or fibers so as to impregnate the reinforcing yarns and/or fibers.

Claim 54 (Withdrawn): A process for the fabrication of a finished product, comprising the step of thermoforming the article as defined in claim 29, to a final shape, in order at least partially melt the matrix yarns and/or fibers so as to impregnate the reinforcing yarns and/or fibers.

Claim 55 (Currently Amended): The article as claimed in claim 29, wherein said reinforcing yarn and/or fibers further comprise ~~comprising~~ a part made of thermoplastic polymer.

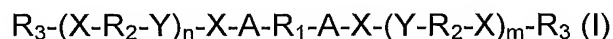
Claim 56 (Previously Presented): The article as claimed in claim 55, wherein said thermoplastic polymer of said reinforcing yarn and/or fiber comprises said at least one polycondensate.

Claim 57 (Currently Amended): The article as claimed in claim 58, ~~[[33,]]~~ wherein the polyamide A1 or the polyester A2 comprises at least 60 mol% of macromolecular chains satisfying formula (I).

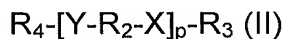
Claim 58 (New): The article as claimed in claim 29, wherein the thermoplastic polymer comprises at least one polyamide A1 or at least one polyester A2,

wherein the at least one polyamide A1 consists of:

30 to 100 mol%, limits inclusive, of macromolecular chains satisfying the following formula (I):



0 to 70 mol%, limits inclusive, of macromolecular chains satisfying the following formula (II):



in which:

Y is the $\begin{array}{c} \text{---N---} \\ | \\ R_5 \end{array}$ radical when X represents the $\begin{array}{c} \text{---C---} \\ || \\ O \end{array}$ radical;

Y is the $\begin{array}{c} \text{---C---} \\ || \\ O \end{array}$ radical when X represents the $\begin{array}{c} \text{---N---} \\ | \\ R_5 \end{array}$ radical;

A is a covalent bond or an aliphatic hydrocarbon radical optionally including heteroatoms and containing 1 to 20 carbon atoms;

R_2 is a branched or unbranched, aliphatic or aromatic, hydrocarbon radical containing 2 to 20 carbon atoms;

R_3, R_4 represents hydrogen, a hydroxyl radical or a hydrocarbon radical

comprising a $\begin{array}{c} \text{---C---} \\ || \\ \text{O} \end{array}$ or $\begin{array}{c} \text{---N---} \\ | \\ \text{R}_5 \end{array}$ group;

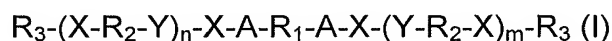
R_5 represents hydrogen or a hydrocarbon radical containing 1 to 6 carbon atoms;

R_1 is a linear or cyclic, aromatic or aliphatic, hydrocarbon radical containing at least 2 carbon atoms and optionally including heteroatoms; and

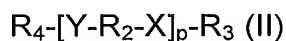
n, m and p each represent a number between 30 and 200;

wherein the at least one polyester A2 consists of:

30 to 100 mol%, limits inclusive, of macromolecular chains satisfying the following formula (I):



0 to 70 mol%, limits inclusive, of macromolecular chains satisfying the following formula (II):



in which chains:

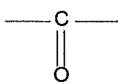
Y is the ---O--- radical when X represents the $\begin{array}{c} \text{---C---} \\ || \\ \text{O} \end{array}$ radical;

Y is the $\begin{array}{c} \text{---C---} \\ || \\ \text{O} \end{array}$ radical when X represents the ---O--- radical;

A is a covalent bond or an aliphatic hydrocarbon radical optionally including heteroatoms and containing 1 to 20 carbon atoms;

R_2 is a branched or unbranched, aliphatic or aromatic, hydrocarbon radical containing 2 to 20 carbon atoms;

R_3 , R_4 represents hydrogen, a hydroxyl radical or a hydrocarbon radical

comprising a  or -O- group;

R_1 is a linear or cyclic, aromatic or aliphatic, hydrocarbon radical containing at least 2 carbon atoms and optionally including heteroatoms; and

n , m and p each represent a number between 30 and 200.